

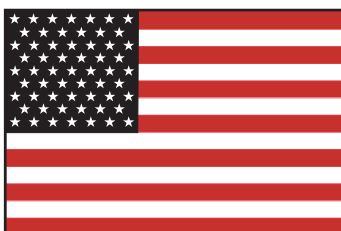


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AVIATION MAINTENANCE ALERTS



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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Model E18S; Poor Engine Operation; ATA 7160

After returning from a flight, the pilot reported a loss of engine power on the left engine. At the time, he believed the problem to be carburetor ice and applied heat to no avail.

A technician found the carburetor airbox (P/N 404-189181-9) was worn excessively. With only slight hand pressure, he could push the air door up approximately .5 inch. Although the specific location was not given, he stated the wear was concentrated at a "weld assembly" on the carburetor airbox.

Part time since overhaul was 1,357 hours.

Beech; Model F33A; Bonanza; Instrument Air System Failure; ATA 3700

After returning from a flight, the pilot reported the instrument air pressure (vacuum) went to "zero" just after takeoff.

A technician discovered the vacuum pump (Rapco P/N RA216CW) drive shaft was sheared. The FAA Service Difficulty Program data base contains six additional reports of drive shaft failure on this vacuum air pump. Two of the six failures occurred in August 2000, and the other four occurred this year. The lowest operating time before failure in the seven reports was 50 hours and the highest was 574 hours. None of the seven total reports gave a cause for the drive shaft failure.

The submitter suggested that all concerned personnel should be aware of these findings and exercise extreme caution especially while operating in instrument meteorological conditions (IMC).

Part total time-574 hours.

Beech; Model E-35; Bonanza; Defective Air/Oil Separator; ATA 8500

After performing an engine-operational test to locate an oil leak, the technician noticed oil coming from the air/oil separator.

It appeared the oil was leaking from the lower outboard corner of the air/oil separator (Beryl D'Shannon P/N B-1119-M). The technician discovered that oil was leaking through corrosion pits and into the exhaust port. He disassembled the unit and found severe corrosion inside the unit.

The submitter recommended the air/oil separator be disassembled and thoroughly inspected for corrosion during each annual inspection.

Part total time-1,291 hours.

Beech; Model M-35; Bonanza; Landing Gear Failure; ATA 3230

During a landing approach, the landing gear failed to fully extend when the pilot placed the selector in the "down" position. At the same time, he lost electrical power. The landing gear could not be locked "down," and the gear collapsed during landing.

The technician discovered the aircraft battery had very low voltage, no capacity, and was shorted internally. Also, he discovered the "FIELD" circuit breaker was open.

After installing a new battery, resetting the "FIELD" circuit breaker, and repairing a bent gear push/pull rod, all the aircraft systems functioned properly.

Part total time not reported.

Beech; Model 58P; Baron; Engine Oil System Leakage; ATA 7930

During a postflight inspection, a technician noticed engine oil dripping from the left wing root area.

The technician removed the wing leading edge and discovered oil was coming from the aluminum line (P/N 102-320001-9) carrying pressure to the cockpit indicator. The line had chafed through the wall thickness from contact with the inboard leading edge fairing rib (P/N 102-100026-602). He inspected another like aircraft and found chafing damage in the same location.

The submitter recommended all operators of like aircraft inspect the oil pressure line, at the inboard end where it attaches to the fuselage bulkhead fitting, for evidence of contact with the adjacent structure.

Part total time-5,117 hours.

Beech; Model 200; King Air; Improper Passenger Restraint Installation; ATA 2520

While installing a replacement passenger restraint assembly, a technician discovered all four installations were incorrect.

The seatbelt/shoulder harness assembly (P/N 128-380071-23) at one position was missing the lapbelt assembly mount locking spacers (P/N 102-530072-21). The lapbelt installation was loose at the mounting

bolts. After checking the other three passenger restraint systems, the technician discovered they were all missing the lapbelt mount locking spacers.

The submitter suggested that all operators of like equipment inspect each passenger seat assembly for correct installation and the presence of the locking spacers.

Part total time-419 hours.

Beech; Model 200; King Air; Pressure Bulkhead Structural Defect; ATA 5312

While complying with the requirements of a 10,000-cycle inspection, the technician discovered the aft pressure bulkhead was defective.

The aft pressure bulkhead upper web (P/N 101-440098-11) had two horizontal scratches. The scratches were approximately 1.5 inches apart, were .006 inch deep, and were located on the forward side of the bulkhead. The scratch depth exceeded the allowable limit and required the installation of a patch in accordance with the manufacturer's technical data.

The submitter stated the horizontal scratches were caused by cutting too deep along the edges of the center interior trim extrusion while cutting and installing carpet. A little time and precaution here would have prevented a costly repair and the possibility of failure of the pressure vessel.

Aircraft total time-7,158 hours.

Beech; Model 200; King Air; Flight Control Defect; ATA 5513

While conducting a scheduled corrosion inspection, which required removal of the right elevator, the technician found collateral damage.

After removing the elevator, the technician discovered the bushing, installed in the end of the tab actuator (P/N 101-524072-1), was very loose on the shaft. (Refer to the illustration.) Failure of this bushing presents the possibility of trim tab flutter and/or restriction of the tab travel.

The submitter recommended the manufacturer consider the implementation of a procedure to lock the bushing in place by using a roll pin or other suitable device to hold the bushing in place. He suggested that all operators of like aircraft conduct a one-time inspection of the bushing and elevator trim tab assembly for security and condition.

Part total time-3,246 hours.



Beech; Model 200; King Air; Tire Defect; ATA 3244

After returning from a flight, the crew reported experiencing a severe vibration coming from the nose section following retraction of the landing gear.

The technician investigated the cause of the vibration and found that a “balance patch” in a nose gear tire (P/N 265F86-4 22X6.75-10) had come loose. The loose balance patch produced a severe imbalance in the nose tire causing the vibration when the tire was spinning down after retraction.

The submitter recommended closely inspecting the security of the tire balance patches at every opportunity.

Part total time-100 hours.

Beech; Model 1900C; Airliner; Defective Main Landing Gear Tire; ATA 3244

During a postflight inspection, a technician discovered a main landing gear tire was defective.

The inboard right main gear tire (Goodyear 22X6.75-10 P/N 365K08-1) had a section of the tread approximately 16 inches by 5 inches missing. Apparently, the tire tread separated during the previous landing. It was evident that the section of tire tread impacted the right inboard wing flap segment causing damage to the flap, nacelle, fairing, lower aft wing skin, and the trailing edge rib.

It appeared the tread separation occurred in a cord layer and not in the recap bond area.

Part total usage-850 hours and landings since recap-987.

CESSNA

Cessna; Models 120, 140, 150, 152, 170, 172, 175, 177, 180, 182, 185, 188, 190, 195, 205, 206, 207, 208, 210, 305, 336, 337; Flat or Tubular MLG Springs; Main Landing Gear Fatigue; ATA 3213

The following article was submitted by the FAA, Aircraft Certification Office (ACE-118W) located in Wichita, Kansas. For further information on this subject refer to the August 2001 edition of this publication (pages 5 and 6). *(This article appears as it was received.)*

Cessna main landing gear (MLG) springs, with either flat solid or round tubular cross sections, are fabricated from high strength steel. Both the flat and tubular springs are shot-peened on the lower surface to increase the number of stress cycles that they can sustain. The shot-peened layer is between 0.010 and 0.020 thick. If the protective layer of paint is chipped or scratched or worn away, the steel may corrode (rust). If the corrosion pits exceed the shot-peened thickness, the fatigue life is greatly reduced. Therefore, it is important to maintain the protective coating on these springs. Annual or 100-hour inspections should include an examination of the finish for chips or scratches or other damage that could allow corrosion to begin. Obviously, operation from unimproved surfaces will increase the likelihood of damage.

When aircraft are operated on skis, the loads increase in the lower portion of the spring because of unsymmetrical and twisting loads caused by the skis. **Such load increases also occur on aircraft that operate on unpaved surfaces typical to agricultural operation.** These increased loads can produce spring fractures originating from corrosion pits in the axle attach holes. These attach holes

need to be examined for corrosion any time the axle bolts are removed. Since the inside of the holes is not shot-peened, there is no acceptable damage depth. This is because fatigue cracks that will produce failure are very small (0.003 to 0.005 in.).

Detailed guidance for removal and replacement of landing gear axles and springs is found in the Cessna Maintenance Manuals. New information has been added to the latest revision of Cessna Model 206/T206 Series 1998 and in Maintenance Manual Number 206HMM06, Chapter/Section/Subject 32-10-00, Revision Number 6, pages 199-210. This new information is useful for the other Cessna models identified in this article.

Cessna; Engine Fuel Strainers (GASCOLATORS); Inspection/Assembly Errors on Current Production Cessna Single-Engine Airplanes

This article was submitted for publication by the FAA, Aircraft Certification Office (ACO) located in Wichita, Kansas. *(This article appears as it was received.)*

The FAA has recently been advised that engine fuel strainers are failing at an increasing rate. These failures are being reported as a result of routine inspections of these components during the maintenance schedules prescribed by the airframe manufacturers. It is strongly recommended that maintenance personnel exhibit care when reassembling the threaded gascolator/fuel strainer standpipe into the fuel strainer housing after internal inspections of these components. The standpipe should be replaced if the standpipe threads are damaged or there is an insufficient number of threads. The current configurations of fuel strainer standpipe have an increased number of threads.

The prior configuration standpipes, which are currently installed, may be acceptable. Satisfactory thread condition with acceptable thread engagement is required for the standpipe to be acceptable when reassembled. It is also necessary that the bottom nut be secured as shown in all of the maintenance manuals with safety wire at the base of the fuel strainer.

Cessna; Model T210N; Centurion; Landing Gear Collapse; ATA 3230

During an afterlanding rollout, the left main landing gear collapsed.

Maintenance personnel recovered the aircraft from the runway and placed it in a hangar for inspection and repair. While testing the gear system, a technician discovered the landing gear powerpack was inoperative. An electrical wire in the nose wheel well had been cut. The cut wire and the remaining electrical wiring for the nose gear down lock switch were misrouted. Evidently, the wire was cut by being in the wrong location during the gear-retraction cycle.

It was recommended that technicians exercise care when routing all electrical wiring to ensure the wiring is properly secured and does not interfere with moving parts.

Part total time not reported.

Cessna; Model 310R; Flight Control Cable Damage; ATA 2710

During a scheduled inspection, a technician discovered the aileron control cables were severely damaged.

All four cables had broken strands and had to be replaced. The left forward carry-through cable had approximately 70 percent of the cable strands broken where they contacted the pulley guard. Also, the cables were rubbing against the “Phenolic” blocks where the cables exited the fuselage.

The submitter stated the left forward cable guard was incorrectly installed and caused the damage to the cable. He recommended inspecting all flight-control cables for freedom of movement and condition during scheduled inspections. Also, he recommended setting a life limit for cable replacement.

Part total time-1,950 hours.

Cessna; Model 336; Skymaster; Wing Flap Problem; ATA 2750

The pilot reported that during a landing approach, he experienced a “split flap” condition. He was able to regain control of the aircraft and land safely.

The technician inspected the flap system and discovered a control cable (P/N 1460100-7) was broken. The break occurred adjacent to the flap actuator inboard bellcrank on the right side approximately 1 inch from the end of the cable. Due to this finding, he inspected the cable assembly for the left wing flap. Using a flashlight and mirror, he could not find the damage to the cable. He removed all the flap cables and discovered they were severely corroded, frayed, the strands were brittle, and were in danger of failure.

The location of the flap cable damage makes detection of damage impossible without removing the cables. The submitter recommended removing the cables and inspecting them closely at regular and frequent intervals.

Part total time-2,893 hours.

Cessna; Model T337F; Turbo Skymaster; Landing Gear System Failure; ATA 3230

While investigating an aircraft landing accident, the pilot stated all of his efforts to extend the nose landing gear failed. He landed the aircraft without the aid of the nose gear.

The inspector discovered the nose landing gear extension/retraction hydraulic hoses were replaced with “newly fabricated” hoses approximately 8 operating hours prior to this event. A test of the nose gear system revealed a restriction in the system that prevented the flow of hydraulic fluid. After removing the orifice and filter assembly, he found rubber particles trapped in the orifice and obstructing fluid flow. There were also rubber particles in the filter and throughout the system.

It was obvious that the rubber particles had come from the “newly fabricated” and installed hydraulic lines. The lines were probably not purged prior to installation.

Part total time-8 hours.

Cessna; Model U206F; Stationair; Wheel Brake Failure; ATA 3242

After completing a preflight inspection, the pilot started the engine and began taxiing when the right wheel brake failed. The aircraft veered to the left before he could regain control and stop the aircraft.

A technician discovered the right brake caliper (P/N C163032-0208) had failed. Also, at the previous parking spot, he found a large puddle of brake fluid where the right main tire was. He suggested the pilot should have detected the puddle of brake fluid during his preflight inspection.

Allowing adequate time and expending the effort required for a proper preflight inspection should prevent this type of incident.

Part total time not reported.

Cessna; Model 402C; Businessliner; Landing Gear Failure; ATA 3213

After takeoff, the pilot experienced difficulty retracting the landing gear. He elected to return to the departure airport and made a normal landing. However, the right main landing gear collapsed when he was taxiing to the parking ramp.

Maintenance personnel inspected the aircraft and found the upper barrel (P/N 5141103-14) of the right main gear strut assembly was broken at the actuator attachment collar.

While interviewing the flightcrew and examining the evidence, the technician concluded the landing gear strut was flat during takeoff, extended fully after takeoff, bottomed out on landing, and broke while taxiing.

The submitter stated that proper strut inflation would prevent this type of defect. He suggested that all personnel check the gear struts for proper inflation at every opportunity.

Part total time-5,000 hours.

Cessna; Model 550; Citation; Electrical System Problem; ATA 2421

The aircraft was brought to the maintenance shop with a report of an ammeter split between the left and right engine generators.

Investigating this report, a technician discovered a loose generator ground cable bolt. After removing the bolt, he found the bolt (P/N AN6-10A) was too long and ran out of threads before tightening. The correct bolt (P/N AN6-6A) provided a tight installation and cured the problem.

The submitter reported finding the same problem on several other aircraft including Model 560 Citations.

Part total time-130 hours.

Cessna; Model 750; Citation; Elevator Hinge Damage; ATA 5520

While conducting a scheduled inspection, a technician discovered cracks in the elevator hinges.

Both inboard elevator hinge assemblies (P/N 6732030) were cracked. The hinge assemblies are attached to the horizontal stabilizer and are located at the inboard ends of each elevator. Each crack was approximately .02 inch long and was in the upper aft end of the hinge fittings.

The submitter suggested that technicians check these hinges closely during scheduled inspections.

Part total time-2,452 hours.

CIRRUS**Cirrus; Model SR-22; Engine-Mount Frame Tube Damage; ATA 7120**

During a scheduled inspection, a technician discovered that an engine-mount frame tube was damaged.

An “Adel” clamp, used to support a fuel line, chafed the engine-mount tube. The rubber cushion on the “Adel” clamp had worn through and allowed the metal band to contact the tube. This damage was located on the lower aft section of the engine mount frame. The chafing damage wore into the mount tube approximately .006 inch requiring replacement of the engine-mount assembly.

The submitter reported finding this chafing damage on both the left and right sides of the lower aft engine-mount frame. He found this discrepancy on two other like aircraft, although the damage was not as severe as in this case. It appears the “Adel” clamp is too long, allowing it to contact the engine-mount tube. After changing the engine-mount assembly, he shortened the clamp attachment bracket to prevent a recurrence of this defect. He recommended that the engine-mount frame assembly on all like aircraft be inspected closely for evidence of chafing.

The aircraft manufacturer issued Service Bulletin (SB) 22-28-01, dated December 17, 2001, which offers a new clamp-support bracket and reroutes the fuel line to alleviate this problem.

Part total time-101 hours.

MOONEY**Mooney; Model M20J; Defective Landing Gear Component; ATA 3230**

While investigating a landing gear collapse incident, an investigator determined the landing gear actuator failed.

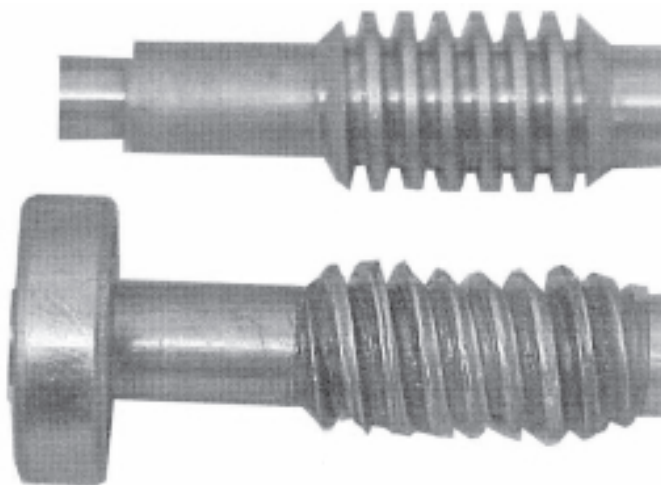
The electric landing gear actuator (Dukes P/N 1057-00-05) was removed and sent to a certified repair station for evaluation. The disassembly and evaluation was done in the presence of an FAA Airworthiness Inspector and repair station personnel. This resulted in finding that the actuator worm shaft

gear teeth (or threads) were worn far beyond acceptable limits. The worm shaft was subjected to a Rockwell hardness test that revealed the shaft material was not hardened (too soft) to the proper specifications. (Refer to the illustration, which compares the worm shaft to a new part.)

This landing gear collapse incident occurred a short time after the worm gear assembly was replaced in accordance with Airworthiness Directive (AD) 75-23-04. The AD references Mooney Service Bulletin (SB) M20-190. Also, Mooney SB M20-189 contains additional information on this subject.

The submitter recommended revising the AD to include removing the actuator gears to allow a visual inspection of the parts for excessive wear that may not be apparent from a “gear backlash” test.

Part total time-168 hours.



PIPER

Piper; Model PA 24-250; Comanche; Nose Gear Failure; ATA 3230

After a landing incident, the pilot stated he could not get the nose landing gear to lock down. All attempts to lock the gear down failed, and the nose gear collapsed when it contacted the runway.

During a thorough inspection, a technician discovered the nose gear drag link clevis pin (P/N 20859-03) was broken. The broken clevis pin allowed the reinforcement mounting screws to bear the load intended for the clevis pin. The screws sheared at the load point, and the screw heads backed out far enough to contact the wheel well side panel and prevented nose gear extension.

The submitter recommended giving this hardware a close inspection for security and condition during scheduled inspections and especially after hard landings.

Part total time-4,977 hours.

Piper; Model PA 28-140; Cherokee; Main Landing Gear Failure; ATA 3213

After a landing incident, the pilot stated the left main landing gear failed when it contacted the runway during a normal landing.

The left main gear lower strut assembly separated from the upper strut cylinder. The lower strut failed at the machined boss for the lower torque link (P/N 65691-00/V).

In accordance with Airworthiness Directive (AD) 72-08-06, the torque link requires an inspection at 500-operating hour intervals. This particular torque link was 66 hours from that inspection, and the failure occurred at the inspection site. The submitter believes this failure was attributable to metal fatigue and hard use since the aircraft is used in a training environment.

The submitter recommended the inspection time listed in AD 72-08-06 be reduced, especially for aircraft used strictly for training, and replacing the torque links with the new part (P/N 78032-000) furnished by Piper.

Part total time-6,416 hours.

Piper; Model PA 28-161; Warrior; Main Landing Gear Strut Defect; ATA 3213

During a scheduled inspection, a technician discovered that one ear of the left main gear upper torque link was broken.

There are two ears attached to the main landing gear upper strut (P/N 65319-004) housing that are used to attach the upper half of the torque link. After finding this defect, he inspected the right main gear and discovered one of the upper attachment ears was cracked. Due to this finding, he inspected the remainder of his fleet of aircraft and found one other strut with a cracked torque link attachment ear.

The FAA Service Difficulty Program data base contains 26 additional reports concerning cracks and separation of the torque link attachment ears. These additional reports involved models PA 28-140, PA 28-151, PA 28-180, and PA 28-181, which use the same main gear strut.

Many of these failures may be due to hard landings, age, metal fatigue, and/or age.

Part total time-11,438 hours.

Piper; Model PA 28R-180; Arrow; Landing Gear Failure; ATA 3230

During a normal landing, the nose and right main landing gear collapsed.

After recovering the aircraft from the runway, the technician moved it to a hangar and conducted a landing gear operational test. At first, the landing gear operation appeared to be normal. After investigation further, he discovered the right main gear “down” microswitch was damaged and “coming on” early. The nose gear microswitch actuation was intermittently early. This caused the gear to stop prior to attaining the “down-and-locked” position.

Part total time-4,000 hours.

Piper; Model PA 28R-201; Arrow; Takeoff Engine Failure; ATA 7160

The pilot/owner stated that during takeoff, he experienced a loss of engine power just after lift-off. He was able to safely abort the takeoff. This aircraft uses a Textron Lycoming Model IO-360 engine.

The technician discovered the alternate air door had separated and was lodged inside the fuel control servo throttle body. This effectively blocked air induction into the engine and caused the loss of power.

This induction air system uses an adapter assembly (P/N 99047-000) to attach the alternate air door hinge. Three rivets (P/N AN 470-AD3) are used to attach the hinge. In this case, the three rivets sheared allowing the door to separate.

The submitter recommended the manufacturer improve the design by installing a more structurally substantial means of attaching the alternate air door assembly.

Part total time-273 hours.

Piper; Model PA 28RT-201; Arrow; Improper Main Landing Gear Wheel Installation; ATA 3246

While conducting an annual inspection, the technician discovered the right main landing gear wheel assembly was not installed properly.

The wheel assembly axle nut (P/N 66820-00) was installed backward. In this configuration, it was necessary to back the nut off far enough to align the cotter pin hole, which left a large gap between the nut and the wheel assembly. (Refer to the illustration.) The axle was severely grooved by contact with the wheel and the bearings. The wheel brake assembly was given credit for at least limiting wheel assembly movement.



The submitter could not determine when or who accomplished the last wheel assembly installation. The length of time the aircraft had been operating in this condition could not be ascertained. This type of shoddy maintenance imposed a very serious safety hazard on the aircraft and occupants. This situation was totally avoidable, and it is very difficult to understand how it could occur.

This aircraft displayed several other glaring safety-related discrepancies that indicated totally improper maintenance.

Part total time-5,554 hours.

Piper; Model PA 31-350; Chieftain; Erratic Engine Fuel Flow Indication; ATA 2823

The pilot reported noticing erratic fuel flow indication on the right engine during takeoff. He aborted the flight and returned to the airport.

The technician found the fuel firewall shutoff valve was causing erratic fuel flow to the engine. Under operational conditions, the shutoff valve would momentarily move toward the “closed” position and then open again. He attributed the valve movement to a severely worn actuator rod-end (P/N 469-153). After he replaced the rod-end and rigged the actuator linkage, normal operation was restored.

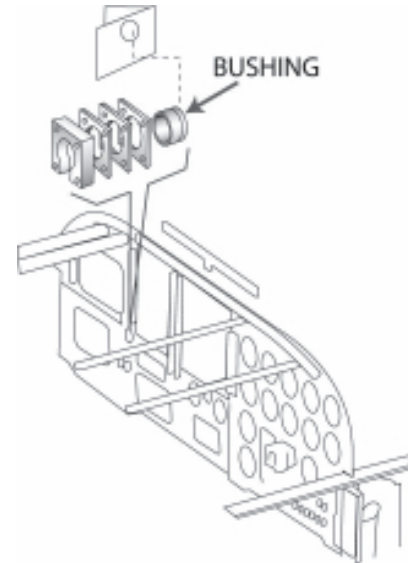
The submitter recommended checking the fuel shutoff valve actuator linkage for wear and condition during scheduled inspections.

Part total time not reported.

Piper; Model PA 34-220T; Seneca; Flight Control Operation Difficulty; ATA 2701

After returning from a flight, the pilot stated the flight control column “locked up” and could not be moved forward or aft. With a sudden “jerk,” the pilot was able to regain control of the aircraft and landed safely.

When the flight controls were freed, the pilot noticed the control column bushing (P/N 68273-02) was “frozen” to the shaft of the control yoke. (Refer to the illustration.) The “jerking” motion dislodged the bushing from the instrument panel attachment plate (P/N 68272-03).



The submitter speculated a lack of lubrication and the presence of corrosion between the inside diameter of the bushing and the control column shaft caused this problem.

Part total time-2,031 hours.

Piper; Model PA 42-720; Cheyenne; Cabin Pressurization System Failure; ATA 2130

While flying at 23,000 feet, the pilot noticed the cabin altitude began a steady increase. After all efforts to stabilize the cabin pressure failed, he declared an emergency. He descended to 11,000 feet altitude and continued the flight to the destination.

Maintenance personnel investigated the report and discovered the bleed air pressure regulator (P/N 584-255) had failed causing the loss of cabin pressure. After replacing the pressure regulator, the cabin pressurization system functioned properly during a test.

The submitter did not give a cause for failure of the bleed air pressure regulator.

Part total time-7,822 hours.

Piper; Model PA 46-500TP; Malibu; Cabin-Entry Door Defect; ATA 5210

In the process of a scheduled inspection, a technician discovered a defect on the cabin-entry door.

The forward door support cable (P/N 89630-004) was severely frayed adjacent to the upper swaged fitting where the “T” handle is attached. The damage required replacement of the support cable assembly.

The submitter made the following statement, “Inadequate design of support cables. Cable kinks at end of swaging, which caused failure. Same problem exists on PA 46-350P series aircraft.”

Part total time-79 hours.

TWIN COMMANDER

Twin Commander; Model 690A; Wing Flap System Defect; ATA 2750

During a scheduled inspection, a technician discovered a structural component of the wing flap system was cracked.

The wing flap master pulley upper support bracket (P/N 510003-357) was cracked at the forward lower inboard corner. The crack extended up and aft at approximately a 45-degree angle for a distance of .9 inch. The location of this defect is somewhat hidden behind cables and linkage and could be easily overlooked during inspections. The submitter stated this defect severely compromised the structural integrity of the bracket and consequently the wing flap system.

The submitter speculated the crack resulted from “excessive stress, possibly from mis-rigged flaps or from extending the flaps at excessive airspeed.” He recommended giving this area special attention during scheduled inspections and maintenance.

Part total time-5,883 hours.

WACO

Waco; Model YMF; Rudder Control System Defect; 2720

While inspecting the aircraft, a technician discovered the rudder control rod was broken.

The rod end (Aurora P/N ASM-4T) was broken at the fourth thread of the shank from the bearing end. The technician discovered the rudder was out of alignment and placed a preload stress on the lower rudder rod end bearing attachment.

He recommended giving the flight control surfaces and the brace wire close attention during scheduled inspections and maintenance.

Part total time-172 hours.

HELICOPTERS

AGUSTA

Agusta; Model A109E; High Engine Oil Temperature; ATA 7921

After an in-flight engine shutdown and an emergency landing, the pilot stated the left engine oil temperature climbed into the yellow arc, and the “engine oil hot” warning light illuminated.

During an investigation, a technician discovered the number 1 engine oil cooler drivebelt (P/N 109-0455-09-103) had broken. Examining the remains of the drivebelt, the technician found the malfunction was due to “structural cord failure.”

The relatively short time in service leads one to suspect there may have been a manufacturing defect, which resulted in failure of the drivebelt cords.

Part total time-45 hours.

BELL

Bell; Model 430; Transmission Oil Leak; ATA 6310

During a scheduled inspection, the technician discovered an oil leak at the main transmission number 1 input drive.

After a closer examination, the technician discovered the bottom of the number 1 engine oil tank was cracked. The crack was approximately 1.5 inches long and was adjacent to the bottom outlet port.

The submitter believes the crack was caused by contact with the forward engine inlet cowling.

Part total time-1,571 hours.

ERICKSON

Erickson; Model S-64F; Skycrane; Main Rotor Blade Defect; ATA 6210

During a postflight inspection and compliance with the inspection requirements of a service bulletin, the technician discovered a “suspect” area on a main rotor blade.

The technician removed the main rotor blade (P/N 6415-20603-041) and confirmed it was cracked. The crack was approximately 1.75 inches long and was located between pocket number 8 and number 9. He speculated corrosion pitting caused the crack.

The submitter recommended the spar areas of the main rotor blades be stripped of paint and inspected closely at frequent and regular intervals. The damaged area is susceptible to corrosion and should be given close attention. Also, continued compliance with the service bulletin should ensure future defects are detected before causing more severe damage.

Part total time-8,203 hours.

EUROCOPTER

Eurocopter; Model BK-117-B1; Poor Engine Performance; ATA 7200

After a flight, the pilot reported experiencing an oscillation of the number 1 engine torque, which fluctuated rapidly. The N2 indication varied between 60 and 100 percent followed by an RPM warning and the illumination of numerous caution lights. He was able to execute a successful single-engine run-on landing.

Maintenance personnel investigated the reported problem and discovered the number 1 engine N2 governor shaft was binding. The binding shaft caused the gear to spin on the shaft and created the symptoms described above. Removal and replacement of the governor assembly (P/N 4-301-212-04) solved the problem.

Part total time since overhaul-827 hours.

MCDONNELL DOUGLAS

McDonnell Douglas; Model 369D; Swashplate Anomaly; ATA 6710

During a scheduled inspection, a technician discovered the main rotor swashplate had excessive movement.

The swashplate moved vertically approximately .75 inch freely. Further investigation revealed wear on most of the “mixer” assemblies (P/N 369D27600). The most severe wear was at the pivot point for the lateral bellcrank.

The submitter did not give a cause for this defect; however, it was necessary to replace the unit.

Part time since overhaul-1,392 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

AVIAT

Aviat; Model A1-B; Husky; Engine Exhaust System Defects; ATA 7800

The aircraft owner reported the engine was making an unusually loud sound.

The technician removed the muffler (P/N 35650) and engine exhaust system duct assembly (P/N 35651). He discovered the internal muffler baffles were missing, and the lower slip joint for the number 4 cylinder was leaking severely.

The submitter recommended that owners report any anomaly and have them investigated by a qualified maintenance technician. Technicians are urged to pay special attention to the engine exhaust system on each aircraft they inspect or maintain.

Part total time-589 hours.

ROTORWAY

Rotorway; Model 162F; Loss of Tail Rotor Control; ATA 6500

During an accident investigation, the pilot stated that he lost tail rotor control.

Inspecting the helicopter, an investigator found the center tail rotor drivebelt (P/N E18-1150) had failed. The submitter speculated the drivebelt failed because it had been misrouted from one idler pulley to the next through the tail boom.

The submitter recommended that all owners of like helicopters inspect the tail rotor drivebelt system for proper routing and drivebelt condition in compliance with the manufacturer's Inspection Bulletin.

Part total time-208 hours.

POWERPLANTS AND PROPELLERS

HARTZELL

Hartzell; Model HC-E4A-31; Blade Bearing Failure; ATA 6111

This propeller assembly was installed on a Beech, Model 1900D aircraft with a Pratt & Whitney, Model PT6A67D powerplant.

After noticing grease leaking from the propeller blade sockets, a technician removed the propeller assembly from service and sent it to a repair station for evaluation.

Repair station technician disassembled the propeller and discovered that two blade bearing races (P/N C792) had failed completely. The bearing races were broken into several pieces. He discovered the bearing "splits" in the races were improperly indexed at the parting line and speculated this may have caused this defect.

Part time since overhaul-2,736 hours.

TEXTRON LYCOMING

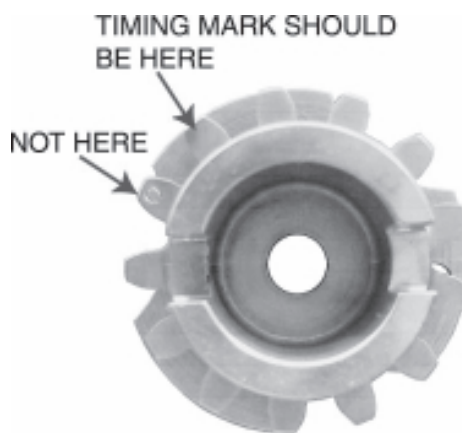
Textron Lycoming; Model O-320; Defective Crankshaft Gear Timing Mark; ATA 8520

This engine was installed in a Piper, Model PA 28-140 aircraft. After installing a new engine, a technician performed an operational test and found it would not develop full power.

The technician suspected the engine timing was not correct. He discovered the crankshaft gear (P/N SL13S19646) timing mark was lined up; however, the timing was not actuated. The crankshaft gear timing mark was off by “one tooth.” (Refer to the illustration.)

The submitter did not give the origin or disposition of the defective part.

Part total time-0 hours.



Textron Lycoming; Model O-320; Accessory Section Defect; ATA 8540

This engine was installed in a Cessna, Model 150H aircraft, in accordance with a Supplemental Type Certificate (STC), used for “banner towing.”

During an annual inspection and engine oil change, the technician discovered metal particles on the oil screen and inside the oil filter. Using a magnet, he found the particles were both aluminum and ferrous metal. The oil remaining in the oil filter looked like “aluminum paint.”

The technician disassembled the engine accessory gear case and found the crankshaft idler gear (P/N LW-13796) shaft and the attaching hardware were loose and allowed the shaft to rotate, wiggle, and elongate the engine crankshaft hole. Some of the attaching hardware had separated and damaged the crankshaft idler gear.

During the last engine oil change conducted 44.6 operating hours prior, there were no defects noted.

The submitter stated the engine was in imminent danger of a catastrophic failure. The submitter suspected the aircraft suffered an unreported propeller strike since the last oil change.

Part total time-1,708 hours.

Textron Lycoming; Model TIO-540; Cylinder Crack; ATA 8530

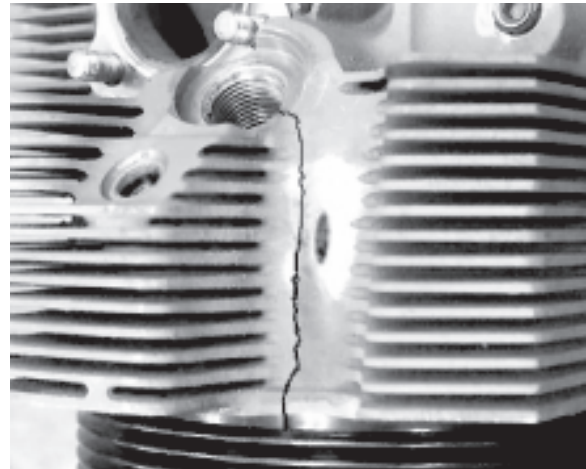
The pilot returned from a flight and reported noticing high cylinder head temperatures (CHT). This engine was installed in a Piper, Model PA 31-350 aircraft.

A technician discovered the number 6 cylinder (Superior P/N SL-540D2) was severely cracked. The temperature probe being installed at this location explains the high CHT indication.

It appeared the crack originated at a spark plug hole and traveled down to the first cooling fin of the steel cylinder barrel. The crack is in the machined area for a push-rod tube. (Refer to the illustration, which shows an area in the center of the push-rod cutout where the cylinder head was penetrated.)

This cylinder was in service only a short time. The submitter urged technicians to conduct a thorough and searching receiving inspection prior to installing new cylinders.

Part total time-198 hours.



AIRNOTES

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ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select “M or D Submission Form” and, when complete, use the “Add Service Difficulty Report” button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report is filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction and Defect Reports (M and D) and Maintenance Difficulty Reports (MDR).

The consolidation, collation and analysis of the data, and the rapid dissemination of trends, problems and alert information to the appropriate segments of the aviation community and FAA effectively and economically provides a method to ensure future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR database contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the AFS-600 Aviation Information web site under the heading SDR Main Menu. The URL is: <<http://av-info.faa.gov>>

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:

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Telephone: (405) 954-6500
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ADDRESS CHANGES

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IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

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AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between May 25, 2002, and June 19, 2002, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFTMAKE ACFTMODEL REMARKS	ENG MAKE ENG MODEL	COMPMMAKE COMPMODEL	PARTNAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T TIME TSO
		AMERIKING AK450	G SWITCH	G SWITCH	05/07/2002 CA020507007	
(CAN) DURING ROUTINE SHOP INSPECTION IT WAS DISCOVERED THAT THE "G" SWITCH IN THIS UNIT REQUIRED VERY LITTLE FORCE TO ACTIVATE. THE UNIT WAS REJECTED AND RETURNED TO OWNER "AS IS" FOR RETURN TO MANUFACTURER FPR REPAIR. THE PROBLEM FOR THISSHOP IS THAT THE REPAIR OF THESE UNITS INCLUDING SHIPPING TO THE MANUFACTURER WOULD BE MORE THAN THE COST OF A NEW UNIT.						
AMD FALCON10	GARRTT TFE73121C		TURBINE	DAMAGED NR 1 ENGINE	05/22/2002 2002FA0000690	
AFTER TAKEOFF AND DURING CLIMBOUT, THE PILOT EXPERIENCED A COMPUTER GENERATED AUTOMATIC ROLL BACK OF POWER ON THE NR 1 ENGINE. THE NR 2 ENGINE WAS BROUGHT BACK TO A MATCHING POWER SETTING. IT WAS THEN NOTICED THAT THE NR 1 ENGINE ITT WASMORE THAN 100 DEGREES HIGHER THAN THE NR 2 ENGINE. THE NR 1 ENGINE WAS SHUT DOWN AS A PRECAUTIONARY MEASURE, AND AN UNEVENTFUL LANDING WAS MADE. AFTER SEVERAL GROUND MAINTENANCE RUNS FOR TROUBLESHOOTING, IT WAS DETERMINED THAT SEVERE HOTSECTION DISTRESS HAD OCCURRED. THE ENGINE WAS REMOVED FOR REPAIR. CAUSE OF PROBLEM UNKNOWN.						
AMTR RV8	ROTAX ROTAX912		RIB	DAMAGED WING ROOT	04/08/2002 AUS20020450	
(AUS) RT WING ROOT RIB FAULTY DUE TO MOISTURE INGRESS. FOUND DURING INSPECTION IAW AD/CA25/7-1.						
AMTR RV8	ROTAX ROTAX912		RIB	DAMAGED WING ROOT	05/02/2002 AUS20020451	
(AUS) WING RIB LOCATED THIRD OUTBOARD FROM THE WING ROOT CONTAMINATED WITH MOISTURE. FOUND DURING INSPECTION IAW AD/CA25/7-1.						
ARONCA 15AC	CONT C1452		SPAR CAP 22840111	CORRODED WING	04/22/2002 CA020507019	
(CAN) INTERGRANULAR CORROSION FOUND ON TOP SPAR CAP (ANGLE) BOTH WINGS. REQUIRED REPLACEMENT (FOUND AT ANNUAL INSPECTION).						
AVIONS R2160	LYC O320D2A	LYC O320D2A	SPARK PLUG L1316339A	FOULED SPARK PLUG/IGNIT	05/19/2002 AUS20020475	2032
(AUS) NO4 CYLINDER SPARK PLUGS FOULED.						
BAC MK3A	DHAVXX GIPSYMAJOR1		SELECTOR D406	LOOSE FUEL SYSTEM	02/16/2002 AUS20020412	
(AUS) DURING THE FIRST FLIGHT FOLLOWING AIRCRAFT RESTORATION THE ENGINE DEVELOPED POWER SURGES. INVESTIGATION FOUND THAT THE FUEL SELECTOR LEVER WAS LOOSE AND NOT ALIGNED WITH THE TANK						

BBAVIA	LYC	CONTROL	FRAYED	04/25/2002	
8GCBC	O360C2E	19023	TE FLAPS	CA020507018	
(CAN) LT AND RT FLAP UPPER CABLES FRAYED AT WING ROOT PULLEYS.					
BBAVIA	LYC	CABLE	FRAYED	05/24/2002	
8GCBC	O360C2E	19023	RT & LT TE FLAPS	CA020524006	
(CAN) LT AND RT UPPER FLAP CABLES FRAYED AT WING ROOT PULLEYS WITH 2ND NOTCH OF FLAP SELECTED.					
BEECH	PWA	RAYTHN	RELAY	CORRODED	04/04/2002 14010
1900D	PT6A67D	B1900D	77GB408R4A18	CONTACT	CA020419003 14010
(CAN) DURING PREFLIGHT CHECK PILOT PULLED THE FIRE HANDLE TO CHECK THE FUEL SHUTOFF VALVE OPERATION , WHEN HE PUSH IT BACK THE VALVE STAYED CLOSED.AFTER INVESTIGATION WE FOUND ALL THE CONTACT ON RELAY (A236K1)CORRODED AND FEW PIN BROKEN.RELAY AND WIRE WAS REPLACED.					
BEECH	PWA	LUCAS	STARTER GEN	CRACKED	02/11/2002
1900D	PT6A67D	23078019	23078019	L/H ENGINE	CA020528003
(CAN) #1 GENERATOR SHUT DOWN IN FLIGHT. AFTER LANDING THE ENGINE WAS SHUTDOWN AND TRIED TO RE-START. STARTER WOULD NOT ENGAGE.INSPECTED L/H STARTER GENERATOR, FOUND THAT THE COOLING FAN WHICH IS PART OF UNIT HAD ITS BLADES ALL CRACKED UP. SUSPECTED BEARING FAILURE. REPLACED STARTER GENERATOR, ENGINE RUNS CARRIED OUT AND CHECKED SERVICEABLE.					
BEECH	PWA	FORK	UNSERVICEABLE	05/02/2002	
200BEECH	PT6A41	1158200683	NOSE/TAIL LANDIN	AUS20020407	
(AUS) NLG ASSEMBLY TUBE UNCHROMED PORTION EXCEEDED 1.27MM (0.050IN) AND LENGTH OF THE TUBE EXCEEDED 91MMM (23.10IN). FOUND DURING INSPECTION IAW AD/BEECH200/45 AND SB2102 REV5.					
BEECH	PWA	FRAME	CRACKED	05/16/2002	11484
200BEECH	PT6A41		FUSELAGE	CA020516011	
(CAN) FUSELAGE RIGHT HAND FRAME AT STA 177.50, STRINGER 8 CRACKED. SHEET METAL REPAIR TO BE DONE PRIOR TO FURTHER FLIGHT.					
BEECH	CONT	BEECH	FITTING	WORN	05/06/2002
58	IO520C	BARONB58	00244002373	HORIZONTAL	AUS20020473
(AUS) RH HORIZONTAL STABILISER ATTACHMENT HOLES WORN. HOLES IN STUB SPAR ALSO WORN.					
BEECH	PWA	PWC	ENGINE	MAKING METAL	05/07/2002
A100	PT6A28	PT6A28	PT6A28	R/H SIDE	CA020527001
(CAN) ENGINE CHIP PLUG INDICATION NOTED WITH NO CHANGE IN ENGINE PARAMETERS, ENGINE SHUT DOWN CARRIED OUT IN CRUISE FLIGHT. INSPECTION OF OIL CHIP PLUG AND ENGINE OIL FILTER REVEALED METAL TRACES, ENGINE WAS REMOVED AND SENT TO PRATT & WHITNEY (CALGARY) FOR FURTHER INSPECTION.					
BEECH	CONT	MAGNETO	SHORTED	04/19/2002	1347
A36	IO550B	6310	LEFT	2002FA0000670	
DURING ROUTINE INSPECTION WHITE POWDER WAS NOTICED AT LEFT MAGNETO VENT. REMOVED MAGNETO FOR INTERNAL INSPECTION AND FOUND COIL HAD SHORTED OUT, ARCING AND MELTING DISTRIBUTOR BLOCK AND GEAR ASSEMBLY. INSTALLED NEW MAGNETO ASSEMBLY.					
BEECH	LYC	CRANKCASE	CRACKED	04/11/2002	
C23	O360A4K	LW13820	ENGINE	CA020503005	
(CAN) DURING A 50 HOUR INSPECTION, AN OIL LEAK WAS NOTED ON THE CRANKCASE HOUSING. FURTHER INSPECTION REVEALED A CRACK ON THE FORWARD LEFT HAND PART OF THE CASE.					
BEECH	CONT	CLAMP	CRACKED	04/15/2002	
D55	IO520C	31561	COUNTERWEIGHT	CA020510020	
(CAN) COUNTERWEIGHT CLAMP FOUND TO BE CRACKED IN THE MIDDLE MID-WAY BETWEEN THE CLAMP RETAINING					
BELL	LYC	LYC	ENGINE	FAILED	06/02/2002
205A1	T5313B	T5313B	ENGINE	CA020607007	
(CAN) A/C WAS IN PROGRESS OF FIREFIGHTING WHEN ENGINE 'FIRE WARNING' ILLUMINATED. AFTER VERIFYING FIRE VIBRATION, PILOT DECIDED TO CARRY OUT AN EMERG LDG. ON DESCENT FROM AP PROX 150 FEET, ENGINE CHIP LIGHT CAME ON AS WELL AS ENGINE OIL LOW PRESSURE WARNING LIGHT. AT SAME TIME PILOT COULD SEE ENGINE OIL PRESSURE DROPPING FAST. NEARING GROUND FIRE EXTINGUISHER WAS ACTIVATED & OIL WAS SWITCHED OFF. A/C LANDED UNDER POWER. ENGINE WAS SHUTDOWN, CLOSING THROTTLE & SWITCHING FUEL OFF. BATTERY WAS SWITCHED OFF & PILOT AN D FORESTY OFFICER EXITED A/C. COMBINED EFFORTS FROM FORESTRY PEOPLE &					
BELL	LYC	BLEED BAND	OUT OF ADJUST	05/26/2002	
205A1	T5317A		ENGINE	CA020530002	
(CAN) WHILE WATER BUCKETING A COMPRESSOR STALL OCCURRED. THE PILOT HOVER TAXIED WITH REDUCED POWER TO THE SHORELINE. AT THE SHORELINE HE DROPPED HIS LOAD AND THE AIRCRAFT WAS RETURNED BACK TO STAGING AREA AND A NORMAL ENGINE SHUTDOWN WAS CARRIED OUT. AFTER THE COMPRESSOR STALL THE FUEL FILTER WAS CHECKED. THE ENGINEER FOUND CONTAMINATION IN THE FUEL FILTER. THE ENGINE BLEED BAN AND VARIABLE INLET GUIDE VANES WERE FOUND OUT OF ADJUSTMENT. THE FUEL CONTROL IS GETTING NEAROVERHAUL SO MAYBE IT WAS GETTING TIRED OR POSSIBLE FUEL CONTAMINATION MIGHT HAVE CONTRIBUTED TO THE					
BELL	ALLSN	SUPPORT	DAMAGED	05/06/2002	
206B	250C20	2060313011215	LANDING GEAR	AUS20020430	
(AUS) REAR CROSS TUBE SUPPORT AREA DAMAGED. SUSPECT THE AREA HAD BEEN DAMAGED BY A HARD LANDING AND THEN INADEQUATELY REPAIRED. THE HELICOPTER HAD ONLY RECENTLY BEEN IMPORTED INTO AUSTRALIA.PERSONNEL/MAINTENANCE ERROR.					
BELL		BLADE	CORRODED	05/20/2002	2968
206L1		206015001107	MAIN ROTOR	HEEA079101	
BLADE HAS A BULGE OVER THE SPAR AT STA. 96.25 INCHES ON THE UPPER SURFACE WHICH APPEARS TO BE EXFOLIATION. BLADE HAS EXCESSIVE CORROSION AND SEPARATION ON THE LOWER SURFACE NEAR THE TIP.					
BELL		MOUNT	WORN	05/01/2002	
206L3		206064107101	ENGINE	HEEA078752	
IN SERVICE FOR 11 1/2 MONTHS. REMOVED DUE TO WEAR OF THE BEARING. ALSO NOTED THE TUBE INSIDE DIAMETER IS MUCH LARGER THAT THE FITTING OUTSIDE DIAMETER CREATING A LOOSE FIT BETWEEN THE TWO. CAUSES THE HI LOC TO BECOME OVERSIZED AND BEYOND LIMITS. SCRAPPED ENGINE MOUNT.					
BELL		TRANSCEIVER	DAMAGED	05/16/2002	
214ST		064102300	VHF SYSTEM	HEEA079074	
INTERMITTENTLY BREAKS SQUELCH AND WEAK. PERFORMED PRELIMINARY INSPECTION. REMOVED CORROSION FROM CHASSIS. REPLACED CORRODED Q109 AND Q110 TRANSISTORS AND INSULATORS, BAD Q102, Q104 AND Q106 TRANSISTOR INSULATORS, BAD Q110 SOCKET AND BROKEN NAMEPLATE. REPLACED BURNED F101 FUSE. FOUND RECEIVER WEAK AND NO TRANSMIT. RESOLDERED RF CONNECTOR. REPAIRED. ALIGNED TRANSMITTER. BENCH					

BELL	LYC	LYC	FITTING	WORN	04/11/2002	
222U	LTS101750C1	LTS101750C1	416209004	FUEL LINE FITTING	CA020521004	

(CAN) ENROUTE TO VICTORIA AIRPORT STRONG SMELL OF JET FUEL NOTICED. THEY WERE JUST IN ZONE WITH TOWER. PILOT DECLARED EMERG (ASKING FOR FIRE TRUCKS) WITH AIRPORT TO BE ON SAFE SIDE. A/C LANDED WITH NO INCID. AND AIR TAXI BACK TO HANGAR. INVEST. OF ODOUR REVEALED: FUEL CNTL TO START FUEL LINE P/N 4-162-090-04 FITTING ON FUEL CNTL UNIT. SEE LTS101-4.4 ILLUSTRATED PARTS MANUAL SEC. 73-10-00 FIGURE 1 OF FUEL DISTRIBUTION SHEET 1 OF 2. THE FLARE ON FUEL CNTL FITTING WORN. LINE CONNECTING TO FITTING ON FUEL CNTL CHAFED OVER PERIOD OF TIME&WOULD NOT SEAL. LINE FOUND TO BE TIGHT AT TIME OF LEAK RETORQUEING LINE HAD NO EFFECT ON STOPPING THE LEAK. LATER INSP OF FLARES

BELL		PITOT TUBE	DAMAGED	05/15/2002	
407		AN58131	STATIC/PITOT SYS	HEEA079036	

CORROSION ON INSIDE AND ON BACKSIDE OF PITOT TUBE. CONNECTION TUBE IS TWISTED, PITOT TUBE HAS SMALL DENT ON EXTERIOR.

BELL		MOUNT	DETERIORATED	05/15/2002	
407		407310203101	TAIL ROTOR	HEEA078998	

ELASTOMERIC RUBBER DETERIORATED ON TAIL ROTOR MOUNT.

BELL		BEARING	WORN	05/15/2002	
407		407340339101	COOLER BLOWER	HEEA079005	

COOLER BLOWER HAS A WORN BEARING.

BELL	ALLSN	SENSOR	MALFUNCTIONED	05/07/2002	
407	250C30	23054164	ENGINE	HEEA078808	

SENSOR PICKUP CAUSING NP1, NP1 RATE, OS, NPOS AND NPD FAULTS TO FADED SYSTEM. REPLACED WITH SERVICEABLE SENSOR PICKUP ASSY.

BELL	ALLSN	WIRE HARNESS	BROKEN	05/08/2002	
407	250C30	407375012101	FADEC	HEEA078875	

BREAK IN CABLE CAUSING FADEC NG1 FAULT AND NG1 CONTINUITY FAULT. BREAK IS APPROXIMATELY 3 INCHES FROM ECU CONNECTOR PLUG.

BELL	ALLSN	GEAR	ROUGH	05/14/2002	
407	250C47B	23071895	GEARBOX	2002FA0000706	

(TM GEAR) UPON VISUAL INSPECTION OF PART. FOUND EXTREMELY ROUGH GEAR TEETH EDGES AT RADIUS ON FORWARD TEETH. SENT FOR WARRANTY.

BELL	ALLSN	GEAR	MISMANUFACTURE	02/27/2002	
407	250C47B	23071895	GEARBOX	2002FA0000707	

(TM GEARS) UPON VISUAL INSPECTION OF NEW PART FROM STOCK. IMPROPER AND UNFINISHED MACHINING ON GEAR TEETH AT RADIUS.

BELL	ALLSN	GEAR	MISMANUFACTURE	04/16/2002	
407	250C47B	23071896	GEARBOX	2002FA0000708	

UPON VISUAL INSPECTION OF NEW PARTS FROM STOCK, IMPROPER AND UNFINISHED MACHINING AND MESHING OF GEAR TEETH AT RADIUS.

BELL		STRUCTURE	SEPARATED	05/20/2002	
412		205030280141	WORK DECK	HEEA079099	

NEWLY INSTALLED WORK DECK FOUND TO BE SEPARATED ON BOTTOM. THE SEPARATED AREA WAS 5 INCHES IN DIAMETER NEAR FWD CENTER OF DECK ASSY.

BELL		MAGNETIC	LEAKING	05/24/2002	
412		PHI212412830	MAIN ROTOR	HEEA079223	

MAIN ROTOR DRIVE MAGNETIC SEAL LEAKS. REPLACED WITH SERVICEABLE PART.

BELL		BLADE	DAMAGED	05/30/2002	13953
412		412015300109	MAIN ROTOR	HEEA079588	

FIBERGLASS REPAIR BELOW THE TRIM TAB ON THE MAIN ROTOR BLADE HAS SOME SEPARATION ALONG THE EDGES.

BNORM	LYC	PUMP	WRONG PART	04/30/2002	
BN2B20	IO540K1B5	RG17980	ENGINE FUEL	AUS20020404	

(AUS) AFTER ENGINE CHANGE AND DURING GROUND RUNS THE ENGINE FAILED WHEN THE BOOST PUMP WAS TURNED OFF. SUBSEQUENT INVESTIGATION FOUND THAT THE INCORRECT FUEL PUMP PN RG17980 WAS FITTED AT OVERHAUL IN LIEU OF PUMP PN RG17980D. BECAUSE THE INLET PORT IS ON THE OPPOSITE SIDE OF THE PUMP THE USE OF THIS PUMP CAUSES THE AIRFRAME SUPPLY TO BE CONNECTED TO THE PUMP OUTLET AND VICE VERSA. THE SPLINE LENGTH OF THE INCORRECT PUMP IS SHORTER THAN THAT OF THE CORRECT ITEM AND ONLY ENGAGES BY (AUS) HORIZONTAL STABILISER BEARING ATTACHMENT FITTINGS CORRODED. CPCP - LEVEL 2 CORROSION.

BOLKMS		TRANSDUCER	FAILED	05/14/2002	
BO105S		214074108101	FLT COMPUTER	HEEA078934	

YAW DROPS OFF LINE AND HAS NO RESISTANCE MOVEMENT.

BOLKMS		BUSHING	CORRODED	05/06/2002	
BO105S		1053172902	M/R DRIVE	HEEA079252	

PITTED CORROSION ON BUSHING FLANGES ON MAIN ROTOR DRIVE.

BOLKMS		BATTERY	WEAK	05/30/2002	12
BO105S		RG390E	MAIN	HEEA079797	

BATTERY WEAK.

BOLKMS		CONTROL	DAMAGED	05/30/2002	
BO105S		071121540	COCKPIT	HEEA079786	

DIGITS WEAK. REPLACED DISPLAY LENS AND PHOTOCCELL. ALSO REPLACED MISSING FROM END OF KHZ SELECTOR SHAFT. REPLACED BAD 28 VOLT BACKLIGHT BULB AND TOUCHED UP FACEPLATE WITH BLACK PAINT. BENCH CHECK

CESSNA	LYC	BRACKET	CRACKED	02/22/2002	14000
152	O235*	04320049	HORIZ STAB	2002FA0000668	

WHILE INSPECTING THE NUTPLATES IAW AD. WE FOUND THAT THE FORWARD UPPER WELD JOINT HAD CRACKED ADJACENT TO THE NUTPLATES THEMSELVES. THIS AIRCRAFT IS OPERATED IN A TRAINING ENVIRONMENT AND IS SUBJECTED TO A LOT OF ABRUPT MANEUVERS INCLUDING SPINS. DUE TO THE LOCATION OF THE CRACKS, MORE EMPHASIS SHOULD BE PLACED ON INSPECTING THE ENTIRE BRACKET AND NOT JUST THE NUTPLATES, ESPECIALLY AIRCRAFT THAT HAVE HAD THE NUT PLATES REMOVED TO DO AWAY WITH THE AD INSPECTION.

CESSNA	LYC	BRACKET	CRACKED	02/25/2002	10000
152	O235*	04320049	HORIZ STAB	2002FA0000671	

WHILE INSPECTING THE NUTPLATES IAW AD, WE FOUND THAT THE FORWARD UPPER WELD JOINT HAD CRACKED ADJACENT TO THE NUTPLATES THEMSELVES. THIS AIRCRAFT IS OPERATED IN A TRAINING ENVIRONMENT AND IS SUBJECTED TO A LOT OF ABRUPT MANEUVERS INCLUDING SPINS. DUE TO THE LOCATION OF THE CRACKS, MORE EMPHASIS SHOULD BE PLACED ON INSPECTING THE ENTIRE BRACKET AND NOT JUST THE NUTPLATES, ESPECIALLY AIRCRAFT THAT HAVE HAD THE NUTPLATES REMOVED TO DO AWAY WITH THE AD INSPECTION.

CESSNA 152	LYC O235L2C	MAGNETO	CONTAMINATED ENGINE	05/25/2002 CA020530016	
(CAN) AIRCRAFT RAN ROUGH WHEN RT MAG SELECTED. OIL CONTAMINATION WAS FOUND IN BREAKER COMPARTMENT. MAGNETO WAS REPLACED AND A/C GROUND RUNS COMPLETED.					
CESSNA 170	CONT C1452	PLATE 05501623	CRACKED PROP SPINNER	03/28/2002 AUS20020417	
(AUS) PROPELLER SPINNER BACKPLATE CRACKED. CRACK TRAVELED AROUND PROPELLER FLANGE AREA AND RADIATED OUT TO THE FLANGE.					
CESSNA 172B	CONT O300C	PISTON 646255	BROKEN ENGINE	05/09/2002 CA020530009	
(CAN) ENGINE RAN WELL NO VISIBLE PROBLEM. PIECE OF PISTON SKIRT BROKEN LOOSE HELD IN BY OIL RING AND CYLINDER CURVE ONLY.					
CESSNA 172F	CONT O300C	BRACKET 05130633	CRACKED PAX DOOR FRAME	05/16/2002 CA020530006	
(CAN) DURING SCHEDULED MAINTENANCE, IT WAS DISCOVERED THAT THE BELL CRANK BRACKET P/N 0513063-3 IN THE BULKHEAD ASSEMBLY, FRONT DOOR POST WAS CRACKED. THE FORWARD FLANGE OF THE BRACKET WAS CRACKED. A NEW PART WAS INSTALLED USING THE EXISTING RIVET SIZE AND PATTERN.					
CESSNA 172M	LYC O320E2D	TUBE 0923150	DEFECTIVE TIRE	05/21/2002 CA020522006	
(CAN) FAILURE OF CENTER SEAM OF 600 X 6 - 6 PLY TIRE TUBE. THIS HAS OCCURED ON 2 OTHER SEPERATE OCCASIONS. SUPPLIER HAS BEEN NOTIFIED AND HAS INDICATED THAT HE WAS GOING TO CONTACT MICHELIN AND INQUIRE ABOUT THE PROBLEM. PICTURES OF DEFECT ARE ON FILE AND MAY BE E-MAILED IF REQUESTED. SUPPLIER HAS BEEN ASKED FOR CREDIT FOR THESE TIRE TUBES.					
CESSNA 172P	LYC O320D2J	LYC O320D2J	IGNITION C2925010105	FAULTY IGNITION SWITCH	05/01/2002 AUS20020446
(AUS) IGNITION SWITCH CONTACTS DIRTY AND OILY. ONE CONTACT ARCING. SUSPECT INCORRECT LUBRICANT USED ON SWITCH.					
CESSNA 172P	LYC O320D2J	BATTERY 012096	MISINSTALLED ELT	05/01/2002 AUS20020432	
(AUS) ELT BATTERIES INCORRECTLY FITTED.					
CESSNA 172R	LYC IO360A1A	SWITCH S28701	FAILED COCKPIT	04/09/2002 2002FA0000672	
REPLACED PILOTS PUSH TO TALK SWITCH. 0510.2 TACH.					
CESSNA 172R	LYC IO360A1A	SWITCH S28701	INOPERATIVE COCKPIT	04/09/2002 2002FA0000673	510
REPLACED COPILOTS PUSH TO TALK SWITCH.					
CESSNA 172R	LYC IO360A1A	SWITCH S28701	INOPERATIVE COCKPIT	04/15/2002 2002FA0000674	517
HAD TO REPLACE THE PILOTS PUSH TO TALK SWITCH.					
CESSNA 172RG	LYC O360F1A6	ACTUATOR 12810013	CRACKED LANDING GEAR	04/22/2002 AUS20020386	
(AUS) RH MLG ACTUATOR CRACKED. FOUND DURING INSPECTION IAW SEB01-2. SEE MDR 02/0385 FOR SIMILAR DEFECT.					
CESSNA 182K	CONT O470R	CARBURETOR 1048931	MISREPAIRED ENGINE	04/05/2002 AUS20020410	
(AUS) DURING GROUND RUNS FOLLOWING ENGINE CHANGE THE ENGINE WAS FOUND TO BE RUNNING ROUGH, TOO LEAN AND MIXTURE ADJUSTMENT WOULD NOT CORRECT THE FAULT. CARBURETOR WAS DISMANTLED AND THE FOLLOWING DEFECTS DISCOVERED:- 1. MAIN JET INCORRECT PN. 2. AIR METERING JET INCORRECT PN (USED) 3. AIR METERING PIN SPRING UNSERVICEABLE. 4. AIR METERING/ ACCELERATION PUMP LINKAGE WORN AND NOT SECURED CORRECTLY TO THROTTLE SHAFTS. 5. FLOAT BRACKET WORN (USED) 6. FLOAT NEEDLE WORN (USED) 7. STEEL SPLIT PINS USED IN LINKAGE CARBURETOR WAS NEWLY OVERHAULED BY CONSOLIDATED FUEL SYSTEMS ON FAA FORM					
CESSNA 182Q	CONT O470U	WINDSHIELD 07135381	MISMANUFACTURE COCKPIT	04/03/2002 AUS20020454	
(AUS) REPLACEMENT FRONT WINDSCREEN WAS THE WRONG SIZE. THE HEIGHT OF THE SCREEN WAS TOO SHORT AND THE RT SIDE WAS NOT LONG ENOUGH. A SECOND REPLACEMENT WINDSCREEN HAD SIMILAR PROBLEMS. BOTH SCREENS WERE GENUINE MANUFACTURER SUPPLIED PARTS. MANUFACTURING ERROR.					
CESSNA 188B	CONT IO520D	HUB D5858C402	CORRODED PROPELLER	04/17/2002 AUS20020434	
(AUS) PROPELLER HUB CORRODED IN AREA OF BLADE SOCKETS AND ON SHIM FACES.					
CESSNA 206	LYC TIO540AJ1A	GASKET MS913401	LEAKING ENGINE	05/02/2002 2002FA0000676	328
GASKET FAILED CAUSING LOSS OF ENGINE OIL LEADING TO CATASTROPHIC ENGINE FAILURE. AIRCRAFT LANDED SAFELY IN FIELD. THERE IS NO REQUIREMENT TO GO BACK AND REPLACE THESE GASKETS.					
CESSNA 208B	PWA PT6A114A	CESSNA 26012014	LATCH 260120413	LOOSE LATCH	05/29/2002 CA020529005
(CAN) WHILE ON A BIRD DOGGING MISSION OVER A FIRE THE AIRCRAFT WAS IN A TURN OVER THE TARGET, A THUMP WAS HEARD, AN INITIAL SEVERE VIBRATION WAS FELT, ON CLIMBING TO ALTITUDE THE VIBRATION BECAME INTERMITTENT. THE AIRCRAFT RETURNED TO BASE, UPON ARRIVAL AT THE TANKER BASE IT WAS DISCOVERED THAT THE FORWARD CARGO POD DOOR HAD OPENED IN FLIGHT. THE AIRCRAFT WAS INSPECTED FOR DAMAGE, AND THE DOOR LATCHES WERE ADJUSTED TO ENSURE A POSITIVE LOCK. THE AIRCRAFT WAS RETURNED TO SERVICE. THE OTHER C208B AIRCRAFT WERE INSPECTED AND FOUND TO BE SERVICEABLE.					
CESSNA 310R		OIL COOLER 635996	DAMAGED ENGINE	04/14/2002 2002FA0000669	
THE LISTED OIL COOLER WAS OVERHAULED. PROBLEM: THE THREADS FOR THE OIL TEMP PROBE WAS 40 PERCENT DESTROYED OR GONE. THIS AREA WAS NOT INSPECTED OR OVERLOOKED, WAS NOT POSSIBLE TO INSTALL OIL TEMP PROBE. RETURNED OIL COOLER TO OVERHAUL COMPANY.					
CESSNA 340	CONT TSIO520K	BRACKET 633129	CRACKED RECIPROCATING	04/14/2002 AUS20020433	1632
(AUS) LH ENGINE INDUCTION SYSTEM BALANCE TUBE FORWARD ATTACHMENT BRACKET BROKEN ALLOWING THE BALANCE TUBE TO SEPARATE FROM THE MANIFOLD.					
CESSNA 402C	CONT TSIO520VB	FITTING 08113508	CRACKED WING, MISCELLANE	05/17/2002 AUS20020455	14201
(AUS) LH AND RH LOWER STUB WING FITTINGS CRACKED. FOUND DURING NDT INSPECTION.					

CESSNA 402C	CONT TSIO520VB		CONTROL	MISRIGGED AILERON TAB	05/10/2002 AUS20020452	
(AUS) AILERON TRIM SYSTEM RIGGED IN REVERSE.						
CESSNA 421C	CONT GTSIO520L	PRESTOLITE ALV9401	NUT 632436	MISSING DC	05/07/2002 AUS20020495	
(AUS) RH ALTERNATOR DRIVE SHAFT COUPLING RETAINING NUT MISSING. SPLIT PIN WAS STILL INTACT. SUSPECT NUT SPLIT AND FELL OFF. LOOSE COUPLING CONTACTED ENGINE DRIVE GEARS CAUSING METAL CONTAMINATION OF THE						
CESSNA 650			HYDRAULIC 6207023202	CRACKED HYD SYSTEM	05/28/2002 2002FA0000678	
LINE WAS CRACKED BEHIND AN ADEL CLAMP. MINOR PITTING AND CORROSION WAS EVIDENT ONCE CLAMP WAS REMOVED FROM LINE. LINE HAD BEEN PREVIOUSLY REPLACED ON 01/02. TWO OTHER HYDRAULIC LINES, P/N 6207023-154 AND 6207021-152 WERE REMOVED AND FOUND TO HAVE SIMILAR CORROSION AND PITTING.						
CESSNA 750	ALLSN AE3007C	CESSNA 750	HINGE	CRACKED FWD TRAILING EDG	04/17/2002 CA020607001	
(CAN) A CRACK OF 0.30" WAS FOUND IN THE INBOARD SIDE OF THE HINGE BRACKET LOCATED IN THE FORWARD FROM THE TRAILING EDGE UNDER STIFFENER.						
CESSNA A185F	CONT IO520D		CYLINDER 654961C	WORN ENGINE	04/27/2002 CA020510016	
(CAN) ENGINE INDICATING SYS & PARAMETERS WERE OP NORMALLY. AT 164.1 HRS OF OP, A CYLINDER DIFFERENTIAL CHECK WAS CARRIED OUT. ALL CYLINDERS WERE FOUND TO BE IN 60/80 RANGE. A/C CONTINUED TO FLY & AT 260.6 HRS OF OP, A 2ND DIFFERENTIAL CHECK SHOWED READINGS OF LOW 50'S WITH ONE CYLINDER 24/80. 2 CYLINDERS SHOWED EXHAUST VALVE LEAKS. TCM WAS CONTACTED & ALL CYLINDERS WERE REMOVED & SENT TO A REPAIR STATION FOR INVESTIGATION. THOSE CYLINDERS WERE REPAIRED & INSTALLED. A/C WAS GROUND RUN & TEST FLOWN, PRODUCING ADEQUATE POWER IN ALL FLT CONDITIONS.						
CESSNA A185F	CONT IO520D		PULLEY 0512128	BROKEN TE FLAPS	05/22/2002 CA020530008	
(CAN) WHEN SELECTING FLAPS FOR LANDING, LEFT FLAP WOULD NOT COME DOWN. AIR PRESSURE KEPT IT UP. PILOT SELECTED FLAPS UP, AND LANDED.						
CESSNA A185F	CONT IO520D		FORK 6960298	CRACKED MLG	05/16/2002 CA020523017	
(CAN) BOTH BOW WHEEL FORKS HAVE TWO CRACKS EACH UP TO 1.5 INCHES LONG LOCATED ON THE AFT UPPER EDGE OF FORK. THE CRACKS ARE RUNNING FROM EDGE OF THE FORK FORWARD THE TWO 5/16 INCH REAR MOUNTING BOLT HOLES. ONE OF THE CRACK HAD GONE BEYOND THE HOLE.						
CESSNA U206B	CONT IO520F		HINGE 122005311	CRACKED LT & RT AILERONS	05/17/2002 CA020530010	
(CAN) AILERON BRACKETS WERE LOOSE ON SPAR AND IN SKIN ATTACH. UPON EXAMINATION FOUND BOTH BRACKETS CRACKED AT REAR AND BOTTOM FLANGES. IT APPEARS THAT THE BRACKETS HAD BEEN LOOSE PREVIOUSLY AND REPAIRED BY SUBSTITUTING CHERRY MAX THROUGH BOTTOM SKIN WHICH DID NOT SOLVE PROBLEM. RT & LT AILERON HINGE BRACKETS P/N 1220053-11 & 1220053-18.						
CESSNA U206F	CONT IO520F		HINGE 122005311	CRACKED CONTROL SURFACE	05/14/2002 CA020529003	
(CAN) CRACK FOUND IN LOWER ATTACH FLANGE DURING SPECIAL INSPECTION PER CESSNA CONTINUED AIRWORTHINESS PROGRAM. THIS WAS LEFT HAND INBOARD HINGE. ALSO FOUND RIGHT HAND INBOARD HINGE CRACKED. OUTBOARD LEFT HAND HINGE HAD BEEN RECENTLY REPLACED.						
CESSNA U206G	CONT IO520F	CONT IO520F	SPARK PLUG URHB32E	BROKEN CYLINDER	05/06/2002 CA020515003	
(CAN) ENGINE DEVELOPED A KNOCK ON RETURN FLIGHT IN CRUISE. REELED LOWER SPARK PLUG ON NR 6 CYLINDER BROKEN FLUSH WITH THE OUTSIDE OF THE CYLINDER. REMAINDER OF SPARK PLUG WAS FOUND HANGING ON THE LEAD. SPARK PLUG WAS REPLACED.						
CESSNA U206G	CONT IO520F	CONT IO520F	EXHAUST SA52000	FAILED RECIPROCATING	04/30/2002 AUS20020421	
(AUS) NO4 CYLINDER EXHAUST VALVE LEAKING. INVESTIGATION FOUND EROSION AROUND THE HEAD OF THE EXHAUST VALVE AS WELL AS LEAKING AT THE VALVE SEAT SEALING FACE.						
CESSNA U206G	CONT IO520F	CONT IO520F	EXHAUST	LEAKING RECIPROCATING	04/15/2002 AUS20020423	441
(AUS) ENGINE EXHAUST VALVES (20FF) LEAKING. ENGINE HAD ONLY 441 HOURS SINCE FACTORY REMANUFACTURE.						
CESSNA U206G	CONT IO520F	CONT IO520F	VALVE GUIDE 643767	FAULTY RECIPROCATING	04/19/2002 AUS20020462	
(AUS) NO5 CYLINDER EXHAUST VALVE STICKING IN VALVE GUIDE.						
CESSNA U206G	CONT IO520F	CONT IO520F	FITTING	LOOSE ENGINE DRAINS	05/10/2002 AUS20020481	
(AUS) LH AFT INDUCTION DRAIN FITTING LOOSE ALLOWING FUEL TO RUN DOWN THE OUTSIDE OF THE DRAIN LINE AND DRIP ONTO THE EXHAUST.						
CESSNA U206G	CONT IO520F	MCAULY D3A34C404	CABLE	FAULTY PROPELLER	05/18/2002 AUS20020482	
(AUS) CSU CONTROL SYSTEM OUTER CABLE STRETCHED.						
DIAMON DA20A1	ROTAX ROTAX912		NEEDLE 961215	WORN CARBURETOR	05/13/2002 CA020514002	
(CAN) THE NUMBER 3 CARBURETOR NEEDLE POSITION WAS FOUND TO BE WORN TO 1/16 INCH						
DIAMON DA20A1	ROTAX ROTAX912F3		ENGINE	FAILED NACELLE	04/12/2002 CA020507003	
(CAN) -PILOT REPORTED 'PROP NOT CYCLING DURING RUN-UP, ALL INDICATIONS NORMAL'. - LINEMAN ATTEMPTED RUN-UP & TRIED TO REACH MAX RPM'S & CYCLE PROP. ENGINE REPORTEDLY LOST POWER & LINEMAN INCREASED THROTTLE, HE KEPT DOING SO UNTIL ENGINE RAN ROUGH, AT WHICH POINT HE RETARDED THROTTLE. ENGINE SEIZED AT IDLE. LINEMAN SUBSEQUENTLY CONTACTED MTC CONTRACTOR & CALLED FOR HELP. COMPANY ENGINEER ARRIVED. AMO CONTRACTOR ARRIVED & PROCEEDED TO INSPECT THE ENGINE. NOSE CASE CHIP PLUG FOUND COVERED IN STEEL FILINGS, WITH VAST & EXCESSIVE QUANTITY OF BRASS, ALUMINUM & STEEL IN THE OIL FILTER. ENGINE REMOVED FOR TEARDOWN BY ROTECH RESEARCH CANADA.						
DIAMON DA20A1	ROTAX ROTAX912F3		NEEDLE 961215	WORN CARBURETOR	05/10/2002 CA020514003	
(CAN) NEEDLE POSITION 3 WAS FOUND TO BE WORN TO 3/32						
GIPPLD GA200	LYC IO540K1A5	SLICK 6330	BEARING	MISOVERHAULED MAGNETO	04/24/2002 AUS20020422	
(AUS) RT MAGNETO BEARING INCORRECTLY ASSEMBLED. ROTOR HARD TO ROTATE. COIL FAULTY.						

GULSTM 690	GARRTT TPE3315251K	SHOE 9937	DIRTY NLG STEERING	04/17/2002 CA020507008	
(CAN) ANTI-SHIMMY FRICTION SHOE HAD DIRT OR SAND IN IT THAT WAS CAUSING MORE DRAG THEN NECESSARY. SAND MAY HAVE BEEN PICKED UP IN PARKING AREA. AIRCRAFT WAS ATTEMPTING TO TAKEOFF, A STEERING CORRECTION WAS MADE AND STEERING COULD NOT BE CENTERED. AIRCRAFT WENT OFF RUNWAY INTO GRASS. AIRCRAFT SUFFERED NO DAMAGE.					
LEAR 45LEAR	LEAR 66323030043	CLEVIS 4532303016001	FAILED MLG UPLOCK	05/15/2002 CA020517006	
(CAN) AIRCRAFT ROLL ON TAKE-OFF. DURING CLIMB FLIGHT CREW SELECTED GEAR UP. MAIN LANDING DOOR CYCLES UP AND DOWN, UNTIL THE PILOT RE-SELECTED GEAR IN DOWN POSITION. AIRCRAFT CAME BACK LANDING AT IT'S MAINTENANCE BASE. MAINTENANCE PERSONNEL FOUND THAT THE LT FREE FALL CLEVIS CABLE ON THE UPLOCK ASSY HAD'NT RESET TO IT'S PROPER POSITION. CABLE WAS RESET AND FUNCTION CHECK SERVICEABLE ON GROUND.					
NEWZE FU24A954	LYC IO720A1B	BOLT AN626A	BROKEN MLG	04/22/2002 AUS20020418	
(AUS) MAIN LANDING GEAR TORQUE LINK BOLT FAILED. LOWER HALF OF OLEO STRUT, TORQUE LINKS, AXLE AND WHEEL ASSEMBLY POPPEDOUT AFTER TAKEOFF.					
PAC CT4B	CONT IO360HB	VENT	FOD BATTERY/CHARGE	04/26/2002 AUS20020415	
(AUS) PLASTIC BATTERY VENT TUBE INCOMPLETELY REMOVED DURING MAINTENANCE. THE LOOSE TUBE MOVED AFT AND LODGED IN THE ELEVATORBELLCRANK LOCATED IN THE TAILCONE. PERSONNEL/MAINTENANCE ERROR.					
PIPER PA25150	LYC O320A2B	ENGINE	MALFUNCTIONED NACELLE	04/11/2002 AUS20020483	
(AUS) ENGINE REMOVED FOR INVESTIGATION INTO LOW OIL PRESSURE AND HIGH OIL TEMPERATURE.					
PIPER PA28151	CONT IO550B	EXHAUST	DAMAGED ENGINE	04/17/2002 2002FA0000681	1045
NR 2 EXHAUST VALVE HEAD MISSING A SECTION (OVERHEATED AND TORCHED AWAY). TRACED TO EXCESSIVE VALVE STEM/GUIDE CLEARANCE. ALL OTHER CYLINDERS WERE REMOVED AND REPORTED TO HAVE EXCESSIVE WEAR, REQUIRING VALVE AND GUIDE REPLACEMENT. 655 HOURS SHORT OF TBO. PLANE WAS 2 MONTHS SINCE LAST ANNUAL AND AT THAT TIME STATIC COMPRESSIONS WERE WITHINLIMITS.					
PIPER PA28151	LYC O320E3D	RIB 3539200LH	CRACKED AILERONS	05/03/2002 AUS20020447	
(AUS) LT AND RT AILERON RIBS PN 35392-00 (LT) AND PN 35392-01 (RT) CRACKED ALONG RADIUS OF FRONT FLANGE.					
PIPER PA28161	LYC W58X10095	CIRCUIT ELECTRICAL SYS	FAILED ELECTRICAL SYS	05/10/2002 2002FA0000679	7620
AIRCRAFT WAS NOT USED FOR APPROXIMATELY (7) MONTHS. AIRCRAFT WAS TIED DOWN OUTSIDE, NEAR SALT WATER ENVIRONMENT. NEW OWNER HAD ANNUAL INSPECTION DONE. DURING ANNUAL INSPECTION FOUND CORROSION ON BELLY HAT SECTION STIFFENER. NO OTHER UNUSUAL CORROSION NOTED. AFTER ANNUAL INSPECTION ELECTRICAL EQUIPMENT BEGAN TO FAIL THAT WAS WORKING DURING ANNUAL INSPECTION. RADIO , LIGHTS, T AND B, AUTO PILOT AND SMU WARNING. FOUND CIRCUIT BREAKERS DEFECTIVE FOR EACH OF THESE					
PIPER PA31	LYC TIO540A2B	STUD 3813	BROKEN CYLINDER	05/07/2002 CA020508016	
(CAN) MAY 7, 2002.HE AIRCRAFT DEPARTED YVR ON A NORMAL POSITIONING FLIGHT TO YYJ. ABOUT 15 MILES OUT OF YYJ, THE CREW NOTED A ROUGHNESS IN THE LT ENGINE FOLLOWED BY OIL COMING OUT OF THE COWLING, AND ELECTED TO PERFORM A PRECAUTIONARY SHUTDOWN. THEY LANDED IN YYJ WITHOUT FURTHER INCIDENT. INVESTIGATION REVEALED THAT THE 3/8 INCH DIAMETER STUD P/N 38-13 AT THE 1:00 POSITION ON THE NR 2 CYLINDER HAD FAILED JUST BELOW THE CASE SURFACE UNDER THE CYLINDER MOUNTING FLANGE. LOSS OFTHIS STUD CAUSED RAPID FAILURE OF THE OTHER 3 STUDS ON THE UPPER FLANGE OF THIS CYLINDER, UNSEATING THE BASE SEAL AND RELEASING OIL. THE LOWER STUDS WERE ALL INTACT AND HOLDING THE CYLINDER IN PLACE.					
PIPER PA31	LYC TIO540A2B	PIPER 487155	SOLENOID L3011	FAULTY LANDING GEAR SEL	05/03/2002 AUS20020466
(AUS) LANDING GEAR SELECTOR SOLENOID STRIKER PIN BENT. NOSE LANDING GEAR INADVERTANTLY RETRACTED DURING TAXI CAUSING MAJOR ENGINE,PROPELLER AND AIRFRAME DAMAGE.					
PIPER PA31	LYC TIO540A2B	SKIN	CRACKED FUSELAGE	05/14/2002 CA020527009	10480 10480
(CAN) PIPER SB 1045 ISSUED TO INSPECT FORWARD WING SPAR ATTACH BRACKETS. INSPECTION REVEALED CRACKING IN FUSELAGE STRUCTURE AND SKIN. REPAIRS CARRIED OUT AS PER SB AND PIPER SERVICE MANUAL AND AC 43-13-1B/2A FIG 4-16. ALL PARTS REQUIRED ASPER SB 1045 WERE AVAILABLE AT PIPER.					
PIPER PA31325	LYC TIO540F2BD	SUPPORT 764028	CRACKED BULKHEAD	05/17/2002 CA020522000	
(CAN) THE BULKHEAD REINFORCEMENT PLATE (KIT P/N 764 028)WAS FOUND CRACKED AT AFT FUSELAGE STA 317.75 WITHIN THE SAME INSPECTION AREA OUTLINED ON PIPER SB 636A. THE REINFORCEMENT PLATE IS A PART OF PIPER KIT 764 028 INSTALLED UNDER AD96-12-12 WITH ABOUT 2000 HOURS SINCE INSTALLATION.					
PIPER PA31350	LYC LTIO540J2BD	COUPLING MVT69183200	CRACKED EXHAUST PIPE	03/26/2002 CA020503003	
(CAN) DURING TOUBLESHOOTING OF HIGHER THAN NORMAL E.G.T. INDICATION, (CAUSED BY MAGNETO), THE RT EXHAUST PIPE COUPLING AT THE TRANSITION WAS FOUND LOOSE. COUPLING P/N MVT69183-200 WAS REMOVED FOR DETAILED INSPECTION, A CRACK APPROXIMATELY 1.5 INCHES LONG WAS DETECTED IN THE LOWER FLAT SURFACE OF THE MIDDLE SEGMENT.					
PIPER PA31350	LYC LTIO540J2BD	LYC LTIO540J2BD	VALVE SL53E19600	FAILED ENGINE OIL TEMPE	05/16/2002 AUS20020460
(AUS) RH ENGINE OIL TEMPERATURE VALVE (VERNATHERM) FAILED.					
PIPER PA31350	LYC TIO540J2BD	STRUCTURE 17689	CRACKED FUSELAGE, WING A	05/06/2002 AUS20020431	
(AUS) FORWARD SPAR ATTACHMENT STRUCTURE LH AND RH SIDE CRACKED.					
PIPER PA31350	LYC TIO540J2BD	TRANSMITTER 550697	DETERIORATED FUEL QUANTITY SE	05/10/2002 AUS20020444	
(AUS) FUEL TANK QUANTITY SYSTEM FLOAT VALVE DISINTEGRATING CAUSINGCONTAMINATION OF THE FUEL SYSTEM AND FUEL FILTER.					
PIPER PA31350	LYC TIO540J2BD	PISTON L16068A	DAMAGED NR 3 CYLINDER	04/12/2002 AUS20020416	
(AUS) RT ENGINE VIBRATION. CRANKCASE PRESSURISED AND OIL VENTED OVERBOARD. ENGINE SEIZED ON SHUTDOWN. INVESTIGATION FOUND A HOLE BURNED IN THE NR 3 CYLINDER PISTON.					

PIPER	PWA	BOLT	SHEARED	05/01/2002	
PA31T2	PT6A135	AN517A	LT MLG	CA020510019	
(CAN) ON APPROACH THE LANDING GEAR WAS SELECTED DOWN, THE RIGHT MAIN & NOSE GEAR LOCKED DOWN CORRECTLY BUT THE LEFT MAIN DID NOT. THE CREW THEN SELECTED EMERGENCY GEAR EXTENSION AND LANDED SAFELY. UPON INSPECTION THE LEFT ACTUATOR UPPER BOLT WAS FOUND TO BE SHEARED.					
PIPER	LYC	SKIN	CRACKED	05/03/2002	
PA32300	IO540K1A5		WING	CA020508015	
(CAN) THE AIRCRAFT WAS STORED IN COLLINGWOOD SINCE NOVEMBER AND FLOWN TO TORONTO IN APRIL FOR ITS ANNUAL. UPON INSPECTION SECTION OF LOWER WING SKIN WAS PEELED BACK, ABOUT EIGHT INCHES, DUE TO SLIPSTREAM. THE INITIAL CRACK HAD BEEN STOP DRILLED. THIS SECTION IS POSSIBLY PRONE TO CRACKING AS A RESULT OF WING FLEXING DURING FLIGHT. THERE ARE OTHER CRACKS STOP DRILLED IN THIS AREA SO A MORE FREQUENT INSPECTION SHOULD BE INITIATED.					
PIPER	LYC	FITTING	BROKEN	05/02/2002	
PA34200	IO360C1E6	67031002	LANDING GEAR	AUS20020424	
(AUS) LANDING GEAR RETRACTION FITTING BROKEN. DOWNLOCKS JAMMED IN THE UP POSITION.					
PIPER		RIVET	LOOSE	05/01/2002	2780
PA34200T			HORIZ STAB	2002FA0000677	
ON BOTH LEFT AND RIGHT STABILIZER TRIM SURFACES THE RIVETS HOLDING THE BRACKET FOR THE TRIM PUSH RODS WHERE LOOSE IN THE EXISTING HOLES.					
PIPER	CONT	CYLINDER	CRACKED	05/13/2002	
PA34200T	TSIO360EB	CL66P15	ENGINE	CA020521005	
(CAN) STEEL BARREL CRACKED AROUND CIRCUMFERENCE JUST BELOW HEAD ATTACH AREA. 90 PERCENT.					
PIPER	PWA	ENGINE	MAKING METAL	02/11/2002	
PA36285	PT6A20	PCE22284	NACELLE	AUS20020474	
(AUS) ENGINE SURGING. INVESTIGATION FOUND METAL CONTAMINATION OF THE ENGINE.					
PIPER		VALVE	BROKEN	05/15/2002	3975
PA46310P		474142	DEICE SYS	2002FA0000682	
DE-ICE BOOTS INOPERATIVE, FOUND AIRBORN MANIFOLD VALVE BROKEN IN TWO.					
PIPER	LYC	PIPER	CRACKED	05/13/2002	
PA60601P	TIO540S1AD	450022001	NOSE/TAIL LANDIN	AUS20020457	
(AUS) NOSE LANDING GEAR STRUT TORQUE TUBE SHAFT CRACKED FROM BOLT HOLE. FOUND DURING MAGNAFLUX INSPECTION.					
SKRSKY		TRANSCIEVER	MALFUNCTIONED	05/20/2002	
S76A		064100900	COCKPIT	HEEA078711	
TRANSCIEVER RECEIVES GARBLED. PERFORMED PRELIMINARY INSPECTION. FOUND RECEIVER VERY WEAK. REALIGNED RECEIVER. NO HELP. FOUND SEVERAL INCORRECT VOLTAGES IN IF AND DETECTOR CIRCUITS. SWAPPED CR309 AND CR310 DIODES AND C323 AND C324 CAPACITORS. REALIGNED PRESELECTOR AND I F, NO HELP. SWAPPED C376 CAPACITOR. ALIGNED I F, NO HELP. REALIGNED PRESELECTOR AND I F AND ADJUSTED R333 IF AGC. RECEIVER SENSITIVITY GOOD, BUT COULD NOT ADJUST SQUELCH TO SPECS. REPLACED I303 IC AND RECEIVER NOW RECEIVING STRONG. REPLACED Q304 RESISTOR. REPLACED I304 IC CHIP AND REALIGNED RECEIVER. REPAIRED. BENCH CHECK					
SKRSKY		BEARING	WORN	05/20/2002	
S76A		SB5200103	SWASHPLATE	HEEA078716	
SWASHPLATE BEARING HAS WORN TEFLON. REPLACED WITH SERVICEABLE BEARINGS.					
SKRSKY		BEARING	WORN	05/20/2002	
S76A		SB5200102	SWASHPLATE	HEEA078717	
SWASHPLATE BUSHING WORN. REPLACED WITH SERVICEABLE BEARINGS.					
SKRSKY		BEARING	WORN	05/20/2002	
S76A		SB5200103	SWASHPLATE	HEEA078718	
SWASHPLATE BEARING HAS WORN TEFLON. REPLACED WITH SERVICEABLE BEARINGS.					
SKRSKY		BLADE	CRACKED	05/20/2002	14894
S76A		7615009100051A	MAIN ROTOR	HEEA078719	
BLADE SKIN CRACKED ON LOWER SURFACE NEAR THE TIP OF TIP RIB.					
SKRSKY		BLADE	DAMAGED	05/20/2002	13778
S76A		7615009100051A	MAIN ROTOR	HEEA078720	
NICKEL LEADING EDGE STRIP IS COMING OFF AFTER BEING REPAIRED ONLY 378:25 HOURS.					
SKRSKY		BLADE	MISMANUFACTURE	05/20/2002	5266
S76A		7615009100053	MAIN ROTOR	HEEA078721	
MAIN ROTOR BLADE MISMANUFACTURED, UNABLE TO BALANCE. TOO HEAVY.					
SKRSKY		ANTI-ICE	MALFUNCTIONED	05/20/2002	
S76A			BELLMOUTH	HEEA078722	
BELLMOUTH HEATS UP BUT WILL NOT EXTINGUISH ANTI ICE CAUTION LIGHT. SENT TO VENDOR FOR REPAIR.					
SKRSKY		BUSHING	LOOSE	05/20/2002	
S76A			FRICTION LEVER	HEEA078723	
ROLL FRICTION ASSEMBLY LEVERS WORN AND BUSHINGS LOOSE. SCRAPPED AND REPLACED WITH SERVICEABLE LEVER.					
SKRSKY		BELLCRANK	WORN	05/20/2002	
S76A		7640003210043	TAIL ROTOR	HEEA078724	
TAIL ROTOR BELLCRANK HAS WORN BEARINGS. REPLACED WITH SERVICEABLE BELLCRANK.					
SKRSKY		POWERPACK	MALFUNCTIONED	05/20/2002	
S76A		7665009803103	ROTOR BRAKE	HEEA078731	
ROTOR BRAKE CAUTION LIGHT DOES NOT ILLUMINATE WHEN ROTOR BRAKE IS SWITCHED ON. RETURNED TO VENDOR FOR REPAIR.					
SKRSKY		SCREW	STRIPPED	05/20/2002	
S76A			GPS ON/OFF KNOB	HEEA078735	
INTERMITTENTLY LOSES RAIM. PERFORMED PRELIMINARY INSPECTION. COULD NOT DUPLICATE PROBLEM. FOUND SEVERAL BUTTONS UNREADABLE AND FOUND SET SCREW ON/OFF KNOB STRIPPED. REPAIRED. BENCH CHECK GOOD.					
SKRSKY		GPS	MALFUNCTIONED	05/20/2002	
S76A		8143902240B	COCKPIT	HEEA078736	
WILL NOT HOLD COORDINATES. PERFORMED PRELIMINARY INSPECTION. FOUND BATTERY DEAD AND CORROSION ON BOARD NEAR BATTERY. REMOVED CORROSION FROM BOARD. FOUND L212 COIL BROKEN. ALSO DISPLAY IS BLURRY AND MISSING ON/OFF KNOB. SENT TO ASM FREEFLIGHT FOR INSPECTION AND REPAIR.					
SKRSKY		MIXER BOX	MALFUNCTIONED	05/20/2002	
S76A		PHI20004	CABIN	HEEA078742	
BLEED OVER TO OTHER CHANNELS OF MIXER BOX WITHOUT SWITCH SELECTED. PERFORMED PRELIMINARY INSPECTION. FOUND SWITCH S1 AND SELECTOR KNOB BAD. REPLACED AND REPAIRED. BENCH CHECK GOOD.					

SKRSKY		GPS	MALFUNCTIONED	05/24/2002	
S76A		8143902240B	COCKPIT	HEEA078743	
GPS DOES NOT DRIVE YELLOW NEEDLE ON HSI IN CAL MODE. UNABLE TO CHANGE FUEL FROM GALLONS TO POUNDS. TO BE SENT TO VENDOR FOR REPAIR.					
SKRSKY		RELAY	FROZEN	05/30/2002	
S76A		7655000902101	ELECTRICAL	HEEA079336	
SUSPECTED NOT LATCHING PROPERLY AND STUCK AT POSITION 21 FROZEN IN PLACE. SCRAPPED.					
SKRSKY	ALLSN	VALVE	STUCK	05/20/2002	
S76A	250C30	23007827	ENGINE	HEEA078713	
SOLENOID VALVE STUCK OPEN. REPLACED WITH SERVICEABLE VALVE.					
SKRSKY	ALLSN	FUEL CONTROL	SURGES	05/20/2002	1689
S76A	250C30S	25490925	NR 2 ENGINE	HEEA078714	
NR 2 ENGINE SURGES. TESTED UNIT AS RECEIVED AND COULD NOT DUPLICATE PROBLEM. UNIT TESTED					
SKRSKY	TMECA	HOSE	LEAKING	04/20/2002	
S76A	ARRIEL1S	48CT3A136000	LANDING GEAR	AUS20020419	
(AUS) RH MAIN LANDING GEAR DOWN. HYDRAULIC HOSE LEAKING. LOSS OF HYDRAULIC FLUID.					
SKRSKY	TMECA	ELECTRICAL	FAULTY	05/09/2002	
S76A	ARRIEL1S		DC GENERATING SY	AUS20020459	
(AUS) DC GENERATING SYSTEM FAULTY. INVESTIGATION COULD FIND NO CAUSE FOR THE PROBLEM BUT THE FOLLOWING ITEMS WERE REPLACED:- 1. NO2 ENGINE STARTER/GENERATOR 2. NO2 GENERATOR CONTROL UNIT 3. NO1 AND NO2 TRIPLE TACHO INDICATORS 4. NO2 ENGINE T5 GAUGE SUSPECT CAUSED BY A VOLTAGE SPIKE.					
SKRSKY		SERVO	WORN	05/20/2002	
S76C		7665009807101	MAIN ROTOR	HEEA078732	
MAIN ROTOR SERVO HAS WORN UPPER BEARING. TO BE SENT TO VENDOR FOR REPAIR.					
SKRSKY	TMECA	SERVO	UNSERVICEABLE	04/29/2002	
S76C	ARRIEL1S	7826002	ROTORCRAFT	AUS20020420	340
(AUS) TAIL ROTOR CONTROL SYSTEM SERVO FAULTY.					
SNIAS		GPS	DAMAGED	05/16/2002	
AS350B		8143802240D	COCKPIT	HEEA079272	
FACEPLATE SEPARATED. FOUND SET SCREWS ON KNOBS WOULD NOT COME OUT. HAD SET SCREWS DRILLED OUT. REPLACED LENS AND KNOBS. REPAIRED. CLEANED FACEPLATE AND ALL BUTTONS. BENCH CHECK GOOD.					
SNIAS	TMECA	TRANSDUCER	FAILED	05/16/2002	
AS350B	ARRIEL1D1	9550166140	P3 PRESSURE	HEEA078708	
INTERMITTENT P3 FAILURES WITH AMBER GOVERNOR CAUTION LIGHT COMING ON.					
SNIAS	TMECA	ENGINE	MALFUNCTIONED	05/16/2002	1558
AS350B	ARRIEL1D1		NACELLE	HEEA078707	
ENGINE TAKES SEVERAL ATTEMPTS TO START AFTER THE ENGINE IS RUN AND GETS WARMED UP. STARTS OK WHEN					
SNIAS		ANTENNA	CRACKED	05/16/2002	
AS350B2		DMC634A	VHF SYSTEM	HEEA079274	
VHF ANTENNA CRACKED AROUND BOLT HOLES. SCRAPPED.					
SNIAS		SERVO	LEAKING	05/16/2002	
AS350B2		SC5083	MAIN ROTOR	HEEA079278	
MAIN ROTOR SERVO LEAKING.					
UNIVAR	LYC	THRUST LINK	CORRODED	05/08/2002	
1083	O435C	A0014B	PROPELLER	CA020510022	
(CAN) THE PROPELLER WAS OVERHAULED ON JULY 18, 1996, WAS REMOVED FOR AD 97-18-02 WITH 42.4 HRS. TSO. ON JUNE 29, 1999 THE AD WAS COMPLETED AND THE PROPELLER INSTALLED ON JULY 2, 1999. ON APRIL 19, 2000 THE PROPELLER WAS REMOVED FROM THE AIRCRAFT WITH 88.3 HRS. TSO. UPON OUR DISASSEMBLY OF THE PROPELLER WE FOUND CORROSION IN ONE OF THE BEARINGS ON ONE SIDE OF THE PROPELLER, AND EXTREME CORROSION ON THE BEARING SURFACES AND THE INNER SURFACE OF THE CLAMP ASSEMBLY. BOTH OF THE BEARINGS AND THE ONE CLAMP REQUIRE REPLACEMENT WITH CORROSION IN THE PROPELLER THIS BAD, I WONDER HOW THIS PROPELLER COULD HAVE REMAINED IN SERVICE FOR ANOTHER 4 YEARS OVER THE MANUFACTURERS OVERHAUL TIMES.					
ZLIN	LYC	SPRING	BROKEN	04/21/2002	
Z242L	AEIO360A1B6	1530650012	PROP CONTROL	CA020507022	
(CAN) A STUDENT PILOT REPORTED TO MAINTENANCE THAT ON A GROUND RUN OF THE AIRCRAFT THAT THE PROPELLER WOULD NOT CYCLE WHEN THE CONTROL WAS PULLED OUT TO PUT THE PROP INTO COARSE PITCH. INVESTIGATION FOUND THAT THE PROP CONTROL FLAT SPRINGS THAT HOLD THE PROP CONTROL SYSTEM RIGID HAD BROKEN. THESE SPRINGS GO THROUGH MANY CYCLES AND BREAK WHEN THEY ARE STRESSED. NEW SPRINGS WERE INSTALLED WITH NO STRESS BETWEEN THE BRACKET AND THE SUPPORT, AND THE PROP FUNCTIONED PROPERLY ON					
ZLIN	LYC	SPRING	BROKEN	04/22/2002	
Z242L	AEIO360A1B6	Z4242170001	NLG STEERING	CA020508003	
(CAN) UPON TAXI A STUDENT PILOT NOTICED AN EXCESSIVE AMOUNT OF PLAY IN THE NOSE STEERING SYSTEM. MAINTENANCE WAS NOTIFIED AND THE RT STEERING SPRING WAS FOUND TO BE BROKEN. THE SPRING WAS REPLACED USING THE MINIMUM SPACING FOR PRELOAD TENSION. STUDENT REMINDED OF GETTING THE AIRCRAFT MOVING BEFORE TURNING THE NOSE WHEEL TO REDUCE STRESS ON THE NOSE GEAR STEERING SPRINGS.					
ZLIN	LYC	SPRING	BROKEN	04/23/2002	
Z242L	AEIO360A1B6	Z4242170001	NLG STEERING	CA020508004	
(CAN) UPON TAXI A STUDENT PILOT NOTICED AN EXCESSIVE AMOUNT OF PLAY IN THE NOSE STEERING SYSTEM. MAINTENANCE WAS NOTIFIED AND THE RT STEERING SPRING WAS FOUND TO BE BROKEN. THE SPRING WAS REPLACED USING THE MINIMUM SPACING FOR PRELOAD TENSION. STUDENT REMINDED OF GETTING THE AIRCRAFT MOVING BEFORE TURNING THE NOSE WHEEL TO REDUCE STRESS ON THE NOSE GEAR STEERING SPRINGS.					
ZLIN	LYC	SPRING	BROKEN	04/19/2002	
Z242L	AEIO360A1B6	Z4242170001	NLG STEERING	CA020508005	
(CAN) UPON TAXI A STUDENT PILOT NOTICED AN EXCESSIVE AMOUNT OF PLAY IN THE NOSE STEERING SYSTEM. MAINTENANCE WAS NOTIFIED AND THE LT STEERING SPRING WAS FOUND TO BE BROKEN. THE SPRING WAS REPLACED USING THE MINIMUM SPACING FOR PRELOAD TENSION. STUDENTS WERE ONCE AGAIN REMINDED OF GETTING THE AIRCRAFT MOVING BEFORE TURNING THE NOSE WHEEL TO REDUCE STRESS ON THE NOSE GEAR STEERING SPRINGS.					

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE	OPERATOR DESIGNATOR
MALFUNCTION OR DEFECT REPORT		ATA Code				
		1. A/C Reg. No. N-				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
2.	AIRCRAFT					
3.	POWERPLANT					
4.	PROPELLER					
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.			
6. APPLIANCE/COMPONENT (Assembly that includes part)						
Comp/App'l Name	Manufacturer	Model or Part No.	Serial Number			
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information:		
				Check a box below, if this report is related to an aircraft		
				<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		
				REP. STA.	OPER.	
				MECH.	AIR TAXI	MFG.
				FAA	COMPUTER	OTHER
				SUBMITTED BY:		
				TELEPHONE NUMBER: () —		

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